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SOUTHERN FOREST EXPERIMENT STATION

E. L. Demmon, Director

New Orleans, La.

STATISTICS ON GUM NAVAL STORES PRODUCTION

By

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* - This is an advance release of Forest Survey data that will be included in complete reports to be published later. This information is subject to correction or amplification as computations proceed.

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STATISTICS ON GUM NAVAL STORES PRODUCTION

The survey of the gum naval stores situation and prospects in the South, now being made by the U. S. Forest Service as a part of the National Forest Survey, falls into two parts: (1) an inventory of the longleaf and slash pine timber resources, and (2) an investigation of gum naval stores operations and production. The inventory of the timber supply is being made by specially trained parties of timber estimators, who, by the end of June 1936, will have covered the entire longleaf-slash pine forest from South Carolina to Texas, inclusive. The study of gum naval stores producers should also be complete by the end of June. Data for this study are obtained by visiting and personally interviewing the processors at their turpentine stills, and by referring to the records of naval stores factors.

During the spring and summer of 1934, the Forest Service obtained information from practically all the turpentine processors[1] in what might be termed the "active" naval stores belt. The belt surveyed is shown on the map (Fig. 1) on page 3. It does not include all the longleaf-slash pine region, but embraces the part within which 96 percent of the gum naval stores processors are located. The number and approximate distribution of processors by counties in the active belt, based upon the location of the timber worked, are shown by dots. No effort is made to show the actual locations of the stills or orchards within the counties. The approximate locations of stills reported to be operating outside the active belt are shown on the map by means of crosses.

Except for the acreage figures given in Table 1 on page 2, all data in this release are based solely on the still canvass made during the spring and summer of 1934. This information is being published now, even though the survey has not been completed, because of its interest to the industry at this time. When the entire region has been surveyed, a full and complete report will be prepared, combining both the timber inventory and the naval stores production study.

Since the turpentine still canvass was made during the midst of the 1934-35 crop season, when production data for that season were incomplete, all figures on production are those for the preceding season, 1933-34. Although many still operators had inadequate records, relying largely on memory to supply the desired information, it was possible to check a great deal of the production data against factors' accounts. There has been no way, however, to check the information received as to the number of crops worked during the season 1933-34. All data concerning the number of gum producers without stills and the number of their crops, are survey estimates based on information obtained from the processors who stilled the gum for them.

Area and Turpentine Working Status of Active Naval Stores Belt, Season 1934-35

Table 1 shows that the active naval stores belt (as here defined) occupies a land area of 65 million acres, nearly three-fourths of which is productive forest land. The nonproductive forest land shown in the table is forest

[1] As used throughout this release, the term "processor" includes only those who maintain turpentine stills.

area that has not the qualities essential for the growth of commercial timber species. The productive forest area can be divided into several classes on the basis of its turpentine working status. These classes are defined as follows:

Area in round timber.--Area bearing uncupped longleaf and slash pine trees in sufficient quantity to justify future working.

Area in working crops.--Area bearing trees that are now being worked for naval stores.

Area in resting and worked-out crops.--Area bearing previously-worked naval stores trees, on which operations are not presently active. This area includes both crops in which the trees are resting prior to further working, and crops in which the trees are completely exhausted for naval stores operations.

Area in nonturpentine timber.--Area occupied for the most part by nonturpentine species, and on which there are too few turpentine trees to justify working.

TABLE 1. -- *Total acreage*[1] *of each survey area, and productive forest acreage classified as to turpentine working status, season 1934-35*

Survey areas	Productive forest area by turpentine working status					Non-productive forest area	Non-forest area	Total area	Percent of total acreage all areas
	Area in round timber	Area in working crops	Area in resting and worked-out crops	Area in nonturpentine timber	Total productive forest area				
	Acres								
South Carolina #1 [2]	928,300	233,900	270,800	1,560,000	2,993,000	-	2,193,900	5,186,900	7.9
Georgia #1 [3]	867,800	3,065,800	1,670,300	1,452,300	7,056,200	-	2,655,000	9,711,200	14.8
Georgia #2	653,500	854,000	849,900	656,600	3,014,000	6,400	2,565,500	5,585,900	8.5
Florida #1 [4]	1,941,100	1,381,300	1,867,800	2,107,500	7,297,700	81,200	2,136,700	9,515,600	14.5
Florida #2 and Alabama #1	3,541,400	1,510,000	2,022,400	2,237,300	9,311,100	21,200	2,475,700	11,808,000	18.0
Louisiana #4 and Miss. #4	3,174,600	236,300	300,700	2,703,100	6,414,700	800	1,665,800	8,081,300	12.4
Total area east of Mississippi River	11,106,700	7,281,300	6,981,900	10,716,800	36,086,700	109,600	13,692,600	49,888,900	76.1
Percent of total area east of Mississippi River	22.2	14.6	14.0	21.5	72.3	.2	27.5	100.0	
Louisiana #3 and Texas #1	----------	3,189,800	----------	7,960,800	11,150,600	13,300	4,503,000	15,666,900	23.9
Total all areas	----------	28,559,700	----------	18,677,600	47,237,300	122,900	18,195,600	65,555,800	100.0
Percent of total acreage all areas	----------	43.5	----------	28.5	72.0	.2	27.8	100.0	

[1] No meanderable waters included.

[2] S.C. #1 - Does not include coastal islands of Beaufort County, 91,200 acres.

[3] Ga. #1 - Does not include Okefenokee Swamp, 412,100 acres, and strip along the coast which contains coastal islands and salt marshes, 384,200 acres.

[4] Fla. #1 - Does not include Ocala National Forest, 263,000 acres.

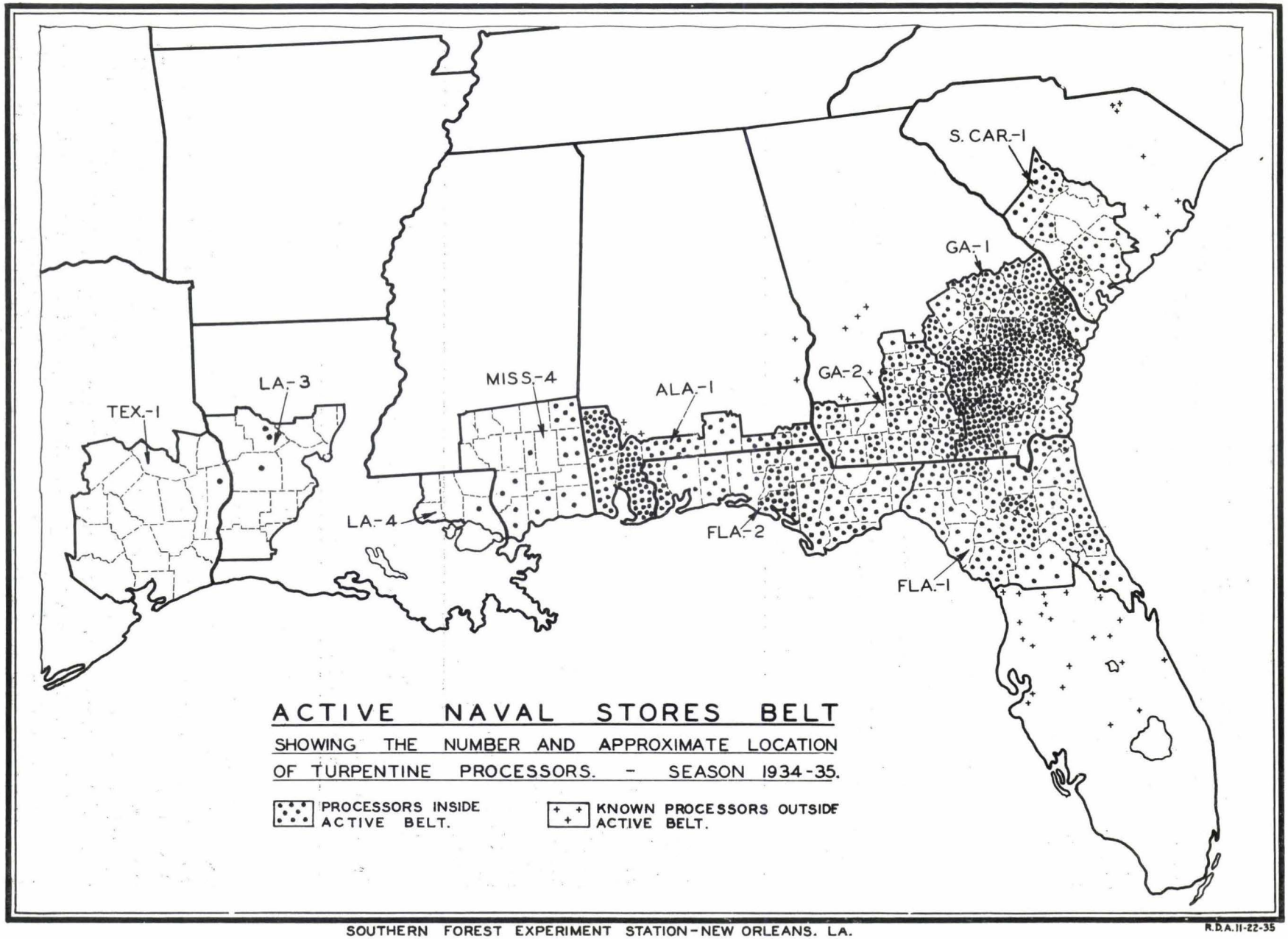

S. CAR.-1
GA.-1
GA.-2
ALA.-1
MISS.-4
LA.-3
TEX.-1
LA.-4
FLA.-2
FLA.-1
ACTIVE NAVAL STORES BELT
SHOWING THE NUMBER AND APPROXIMATE LOCATION
OF TURPENTINE PROCESSORS. - SEASON 1934-35.
PROCESSORS INSIDE ACTIVE BELT.
KNOWN PROCESSORS OUTSIDE ACTIVE BELT.
SOUTHERN FOREST EXPERIMENT STATION - NEW ORLEANS, LA.
R.D.A. 11-22-35

FIGURE 1

Turpentine Processors, Season 1934-35

Table 2 lists the types and number of turpentine processors found in each survey area. As stated above, the total of 1,110 represents as nearly as possible a 100 percent canvass of the active naval stores belt. Twenty-three processors included in this total revived inactive places or started anew in the season 1934-35; seven were active in 1933-34, but probably were shut down in 1934-35. Georgia Area #1, the greatest center of production activity, contains nearly half the total processors in the belt surveyed. The two Georgia areas, together with Florida #1, contain nearly three-fourths.

TABLE 2. -- *Turpentine processors, season 1934-35*

Survey areas	Types of turpentine processors			Total processors	Percent of total number
	Gum producers		Those who do not produce gum, but still for others		
	Those who still their own gum only	Those who still their own and others' gum			
	Number				
S. Carolina #1	35	12	4	51	4.6
Georgia #1	182	307	13	502	45.2
Georgia #2	93	33	1	127	11.4
Florida #1	161	9	-	170	15.3
Florida #2	81	31	1	113	10.2
Alabama #1	45	73	3	121	10.9
Mississippi #4 &) Louisiana #4) Louisiana #3 &) Texas #1)	9	11	2	22	2.0
	4	-	-	4	.4
Total	610	476	24	1,110	100.0
Percent of total number	54.9	42.9	2.2	100.0	

Gum Producers Without Stills, Season 1933-34

The growing agricultural depression in recent years has had its effect upon the naval stores industry. Many small farmers are now turning to the production of gum as a means of augmenting their cash income. Gum producers of this class own no stills; at best, they work a very small area. They either sell their gum outright to a local stiller, or have it stilled and then sell the turpentine and rosin. For the surveyed belt as a whole, the average gum producer of this class worked only about 2,000 cups during the 1933-34 season.

Table 3 shows the extent to which this practice has developed, particularly in Georgia Area #1, where more than 8,000 small producers are located. Alabama #1 has more than a thousand of them. Florida #1, however, with only 30, furnishes a notable contrast.

Since it was not practicable to make a canvass of this class of producers, the figures given in Table 3 are estimates that the Forest Survey has made from information furnished by processors who stilled the gum during the 1933-34 season. Similar estimates for the 1934-35 season are not available, but there are strong indications that both the number and importance of small producers are increasing.

TABLE 3. -- *Gum producers without stills, season 1933-34*

Survey areas	Types of gum producers without stills		Total	Percent of total number
	Those who sell their gum	Those who have their gum stilled, and sell the turpentine and rosin		
	Number			
S. Carolina #1	360	20	380	3.4
Georgia #1	7,850	610	8,460	75.2
Georgia #2	330	10	340	3.0
Florida #1	20	10	30	.3
Florida #2	350	30	380	3.4
Alabama #1	1,050	100	1,150	10.2
Mississippi #4 & Louisiana #4	510	Negligible	510	4.5
Louisiana #3 & Texas #1	-	-	-	-
Total	10,470	780	11,250	100.0
Percent of total number	93.1	6.9	100.0	

Chart #1, on page 13, shows graphically the following data contained in Tables 2 and 3, respectively: (1) The percent of the belt's total processors located in each survey area; and (2) the percent of the belt's total gum producers without stills located in each survey area.

WORKING TURPENTINE CROPS, SEASON 1933-34

Table 4 presents an estimate of the working turpentine crops in the active naval stores belt during the 1933-34 season. The processors' crops were reported by the still operators. The crops listed for the gum producers without stills were estimated from information furnished by processors who stilled the gum. The Survey had no means of checking these figures, but judging them according to production data that were checked with factors' accounts, they are thought to be relatively accurate.

The concentration of work in Southeast Georgia is due mainly to the presence there of second-growth timber, which was of a size and age to attract the industry when the last of the large stands of old-growth pine were worked out in Mississippi, Louisiana, and Texas. It seems likely that as the supply

of available timber in Georgia is reduced by this concentration of working, opportunity for such operations as may be crowded out will be found to the southward and westward.

TABLE 4. -- *Working turpentine crops, season 1933-34, classified by types of crop operators*

Survey areas	Types of turpentine crop operators				Total	Percent of total crops
	Turpentine processors		Gum producers without stills			
	Those who still their own gum only	Those who still their own and others' gum	Those who sell their gum	Those who have their gum stilled and sell the turpentine & rosin		
	Crops of ten thousand cups[1]					
S. C. #1	310	40	110	10	470	3.9
Ga. #1	1,710	2,040	1,060	540	5,350	44.9
Ga. #2	900	370	50	10	1,330	11.2
Fla. #1	1,810	60	10	40	1,920	16.1
Fla. #2	820	270	30	40	1,160	9.7
Ala. #1	490	500	210	80	1,280	10.7
Miss. #4 & La. #4	150	110	90	10	360	3.0
La. #3 & Tex. #1	60	-	-	-	60	.5
Total	6,250	3,390	1,560	730	11,930	100.0
Percent of total crops	52.4	28.4	13.1	6.1	100.0	

[1] Figures rounded to nearest 10 crops.

Chart #3 on page 13 shows graphically the following data: (1) the percent of the total operations made up by each type of processors and gum producers without stills (as obtained from Tables 2 and 3); and (2) the percent of the total 1933-34 crops worked by each group (as given in Table 4).

NAVAL STORES PRODUCTION, SEASON 1933-34

The gum naval stores production during the 1933-34 season, as reported by still operators, is classified in Table 5 according to the three major types of turpentine processors. The production indicated for each group is the total stilled by them, regardless of the gum's source; it includes production from bought gum and from gum stilled on a commission basis for small producers without stills. Practically all gum, regardless of who gathered it, passed through turpentine stills in the 1933-34 season. Hence the processors' reports include the whole production for that season except a very small amount of gum that went directly into industry in the raw condition. Since then, methods have been developed for treating gum for shipment to plants outside the belt, and a

market has been established for raw gum that does not pass through the hands of southern stillers.

Less than four percent of the production during the 1933-34 season was made in Mississippi, Louisiana, and Texas, three states in the western territory, where thirteen years previously the percentage had been, according to Gamble's *Naval Stores Year Book,* five times as great.

TABLE 5. -- *Naval stores production, season 1933-34, classified by types of turpentine processors*

Survey areas	Types of turpentine processors			Total	Percent of total production
	Those who still their own gum only	Those who still their own and others' gum	Those who do not produce gum, but still for others		
	Naval stores units[1]				
S. Carolina #1	11,330	3,020	1,560	15,910	3.3
Georgia #1	76,340	141,150	5,830	223,320	45.7
Georgia #2	43,700	19,560	620	63,880	13.1
Florida #1	77,580	4,030	-	81,610	16.7
Florida #2	27,570	11,330	380	39,280	8.0
Alabama #1	20,900	25,470	380	46,750	9.6
Mississippi #4 & Louisiana #4	7,250	6,030	420	13,700	2.8
Louisiana #3 & Texas #1	3,710	-	-	3,710	.8
Total	268,380	210,590	9,190	488,160	100.0
Percent of total production	55.0	43.1	1.9	100.0	

[1] Figures rounded to nearest ten units. A naval stores unit is made up of one 50-gallon barrel of turpentine and three and one-third 500-pound (gross) barrels of rosin.

Chart #2 on page 13 shows graphically the following data contained in Tables 4 and 5: (1) percent of the total 1933-34 crops worked in each survey area; and (2) percent of the total 1933-34 production processed in each survey area.

SIZE OF TURPENTINE STILLING OPERATIONS, SEASON 1933-34

Table 6 classifies the turpentine processors in each survey area according to their production of naval stores during the 1933-34 season. They are classified on the basis of the total production reported to the Survey, including that from bought gum and from gum stilled on a commission basis for small producers without stills. The table also shows the percent of the total production in each area and in the whole belt that was made by each size class of processors. Thus, in the entire region, half the processors made from 151 to 450 naval stores units each. As a group, they processed one-third of the total output for the belt.

TABLE 6. -- *Turpentine processors, classified by amount of gum naval stores production, season 1933-34; and the proportion of the 1933-34 production made by each class.* *

Stilling production per processor, season 1933-34	Survey areas																Total		
	South Carolina #1		Georgia				Florida				Alabama #1		Mississippi #4 and Louisiana #4		Louisiana #3 and Texas #1				
			#1		#2		#1		#2										
	Operations	Proportion of total production in area	Operations	Proportion of total production in area	Operations	Proportion of total production in area	Operations	Proportion of total production in area	Operations	Proportion of total production in area	Operations	Proportion of total production in area	Operations	Proportion of total production in area	Operations	Proportion of total production in area	Operations	Proportion of total number of operations	Proportion of total production in area
N.S.Units [1]	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	%
0 [2]	1	-	9	-	1	-	3	-	5	-	4	-	-	-	-	-	23	2.1	-
1 - 150	12	7.0	78	3.2	10	1.6	13	1.9	18	4.7	30	5.9	3	2.0	-	-	164	14.8	3.2
151 - 300	16	22.4	135	13.9	22	7.8	47	14.1	38	22.2	34	16.4	5	7.6	-	-	297	26.7	14.0
301 - 450	11	26.1	108	18.3	32	18.8	46	20.7	28	26.5	26	21.1	2	5.5	1	11.3	254	22.9	19.5
451 - 600	6	20.2	69	16.8	31	24.8	25	15.8	8	10.5	10	11.5	3	10.6	1	15.7	153	13.8	16.6
601 - 750	3	12.9	36	11.1	11	11.8	12	9.6	5	8.7	6	8.7	2	10.0	-	-	75	6.7	10.4
751 - 900	1	4.7	22	8.1	8	10.3	4	3.9	4	8.0	3	5.2	2	11.7	-	-	44	4.0	7.3
901 - 1050	-	-	17	7.6	6	8.8	9	10.7	4	9.8	3	6.2	1	6.7	-	-	40	3.6	8.0
1051 - 1200	1	6.7	2	1.0	2	3.5	4	5.6	1	2.8	1	2.5	2	16.5	1	31.2	14	1.3	3.3
1201 - 1350	-	-	8	4.6	1	1.9	2	3.0	1	3.2	-	-	1	9.5	-	-	13	1.2	3.4
1351 - 1500	-	-	5	3.3	-	-	1	1.7	1	3.6	-	-	-	-	-	-	7	.6	2.1
over - 1500	-	-	13	12.1	3	10.7	4	13.0	-	-	4	22.5	1	19.9	1	41.8	26	2.3	12.2
Total	51	100.0	502	100.0	127	100.0	170	100.0	113	100.0	121	100.0	22	100.0	4	100.0	1110	100.0	100.0

* Chart #4 on page 13 presents graphically the percent of the total processors in each size class and the percent of the total 1933-34 production stilled by each class, (as given in the last 2 columns above).

[1] A naval stores unit is made up of one 50-gallon barrel of turpentine and three and one-third 500-pound (gross) barrels of rosin.

[2] Processors inactive in 1933-34, probably active in 1934-35.

AVERAGE SIZE AND YIELD OF TURPENTINE ORCHARDS, SEASON 1933-34

Table 6 on the preceding page, indicates the size of the processors' 1933-34 stilling operations. Table 7 gives the average size of their timber-working operations. It shows, for the processors in each survey area who worked crops during the 1933-34 season, the average number of turpentine crops they worked and the amount of naval stores they produced therefrom. (Production from bought gum and from gum stilled on a commission basis is not included). Thus in Georgia Area #2, the average processor worked 10 crops during the 1933-34 season, from which he produced 496 naval stores units. For the surveyed belt as a whole, the average processor worked 9 crops and produced 385 units therefrom. The season 1933-34 was one of favorable labor and weather conditions generally throughout the region, and the production shown is probably higher than for the usual season.

Table 7 also indicates the average yield per crop and the average number of streaks worked by the processors during the 1933-34 season. In the two Georgia areas and in Florida Area #1 an average of 35 streaks was worked. An average of 34 streaks was worked in Alabama, Mississippi, Louisiana, and Texas. These figures, (35 and 34) are in contrast to 32 streaks, which is usually considered a good season's work. In the past few years there has been a growing tendency towards winter streaking.

TABLE 7. -- *Average number of turpentine crops worked and yield therefrom for processors with woods operations*[1], *season 1933-34*

Survey areas	Average number of crops worked	Average naval stores production from crops worked	Average yield per crop	Average number of streaks
	Crops of 10,000 cups	*Naval stores units*[2]	*Naval stores units*[2]	*Streaks*
S. Carolina #1	7.9	287	36	33
Georgia #1	7.8	342	44	35
Georgia #2	10.2	496	49	35
Florida #1	11.2	479	43	35
Florida #2	10.1	343	34	31
Alabama #1	8.7	336	39	34
Mississippi #4 & Louisiana #4	13.0	563	43	34
Louisiana #3 & Texas #1	15.8	928	59	34
Averages for total belt	9.1	385	42	34

[1] First two classes of processors in Table 2, page 4, who worked crops during 1933-34 season.

[2] A naval stores unit is made up of one 50-gallon barrel of turpentine and three and one-third 500-pound (gross) barrels of rosin.

Proportion of Crops Owned and Leased by Processors, Season 1934-35

The practice of leasing timberland for turpentining is clearly brought out in Table 8, which shows, for the processors who worked crops during the 1934-35 season, the proportion of crops that were owned and the proportion that were leased. In Georgia Area #2, scarcely more than one-tenth of the crops were on owned land. Even in Georgia #1 and Alabama #1, where large individual holdings are located, 65 percent of the crops are on leased land. Taking the naval stores territory as a whole, nearly three-fourths of the crops are on leased land.

Forest Survey figures have been compiled, showing that in the total area owned by the average processor, 39.8 percent is working, 43.2 percent is resting or reserved, and the remaining 17 percent is classed as nonturpentine area.

TABLE 8. -- *Proportion of turpentine crops owned and leased by processors with woods operations [1], 1934-35*

Survey areas	Owned crops	Leased crops	Total
	Percent		
S. Carolina #1	18.5	81.5	100.0
Georgia #1	35.3	64.7	100.0
Georgia #2	11.3	88.7	100.0
Florida #1	22.2	77.8	100.0
Florida #2	20.9	79.1	100.0
Alabama #1	35.0	65.0	100.0
Mississippi #4 & Louisiana #4	20.4	79.6	100.0
Louisiana #3 & Texas #1	16.1	83.9	100.0
Averages for total region	26.9	73.1	100.0

[1] First two classes of processors in Table 2, page 4.

Style of Stills and Stilling Methods Used, Season 1934-35

As noted in Table 2, the Survey found 1,110 gum-turpentine processors in the "active" naval stores belt. Data on the style of still setting and the stilling method used were obtained from all but nine. Of the 1,101 from whom data were obtained, some reported joint ownership of stills, while others reported ownership of more than one still, bringing the total number owned by the group up to 1,160. As used here, the term "still" is synonymous with "kettle". Thus if a man had two stills under one shed, each one was counted separately, and the setting and stilling method of each was considered independent of the other.

On the basis of the setting, the stills were placed in three broad classes, defined as follows:

Government style: Stills built strictly according to Bureau of Chemistry and Soils specifications and under their supervision.

Semi-govt. style: Stills having many of the improved features prescribed by the Bureau of Chemistry and Soils, but not built strictly according to their specifications and under their supervision.

Old-style: Stills of usual construction, lacking generally the features of modern development.

Within all three styles of setting there is considerable variation in construction features. Table 9 classifies the 1160 stills, reported by the 1101 processors, according to the three styles.

TABLE 9. -- *Number of turpentine stills by style of still setting, season 1934-35*

Survey areas	Style of still setting			Total	Percent of total
	Old	Semi-government	Government		
	---------- *Number of stills* ----------				
S. Carolina #1	44	7	1	52	4.5
Georgia #1	368	58	93	519	44.8
Georgia #2	108	11	13	132	11.4
Florida #1	130	11	38	179	15.4
Florida #2	96	5	14	115	9.9
Alabama #1	119	5	4	128	11.0
Mississippi #4 & Louisiana #4	21	-	7	28	2.4
Louisiana #3 & Texas #1	3	2	2	7	.6
Total	889	99	172	1,160	100.0
Percent of total	76.7	8.5	14.8	100.0	

On the basis of the stilling method used, the stills were placed in two classes, defined as follows:

Sound method: The stilling process is controlled chiefly by sound. Some of these stills are equipped with non-recording thermometers as a supplement.

Recording-thermometer method: The stilling process is governed chiefly by a recording thermometer. Sound or bottle and chart may be used as a supplement.

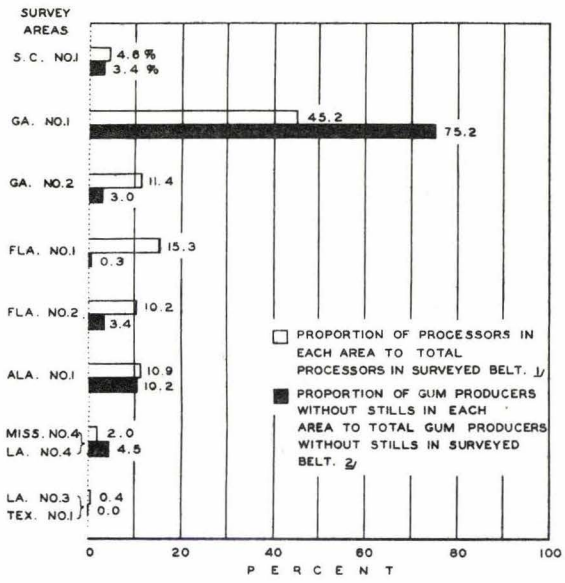
Table 10 classifies the 1160 stills reported by the 1101 processors according to the two stilling methods. Whereas the modern type of still, equipped with a recording thermometer, is slowly but steadily supplanting the old method of regulating the process by the sound at the tail pipe, the old sound method is still used on 80 percent of the stills.

TABLE 10. -- *Number of turpentine stills by stilling method used, season 1934-35*

Survey areas	Stilling method		Total	Percent of total
	Sound	Recording thermometer		
	---------- *Number of stills* ----------			
S. Carolina #1	49	3	52	4.5
Georgia #1	409	110	519	44.8
Georgia #2	93	39	132	11.4
Florida #1	133	46	179	15.4
Florida #2	99	16	115	9.9
Alabama #1	108	20	128	11.0
Mississippi #4 & Louisiana #4	14	14	28	2.4
Louisiana #3 & Texas #1	-	7	7	.6
Total	905	255	1,160	100.0
Percent of total	78.0	22.0	100.0	

CHART NO. 1

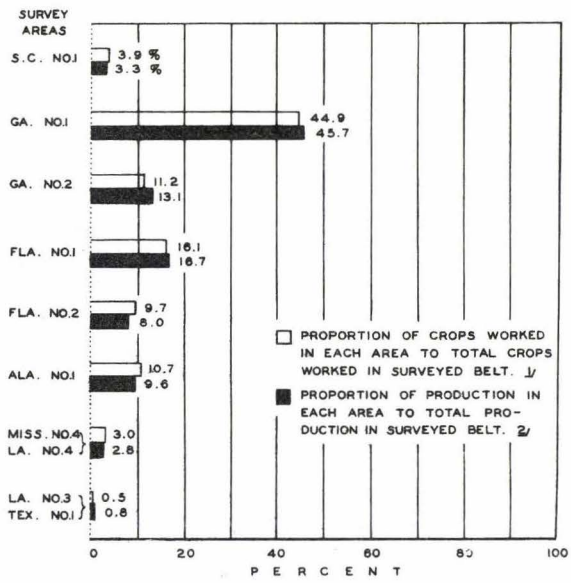
DISTRIBUTION THROUGHOUT THE SURVEYED BELT OF THE TURPENTINE PROCESSORS, SEASON 1934-35, AND THE GUM PRODUCERS WITHOUT STILLS, SEASON 1933-34.



1/ FOR ACTUAL NUMBER OF PROCESSORS, SEE TABLE 2, PAGE 4.
2/ FOR ACTUAL NUMBER OF GUM PRODUCERS WITHOUT STILLS SEE TABLE 3, PAGE 5.

CHART NO. 2

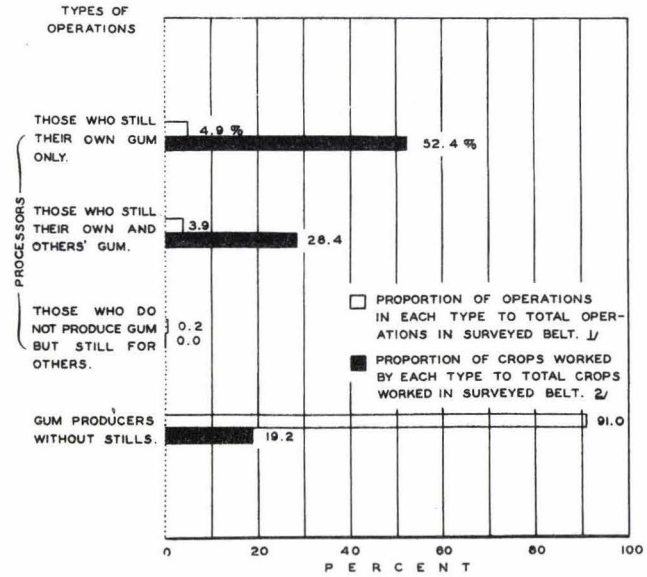
DISTRIBUTION THROUGHOUT THE SURVEYED BELT OF THE TURPENTINE CROPS AND THE PRODUCTION, SEASON 1933-34.



1/ FOR ACTUAL NUMBER OF CROPS, SEE TABLE 4, PAGE 6.
2/ FOR ACTUAL PRODUCTION, SEE TABLE 5, PAGE 7.

CHART NO. 3

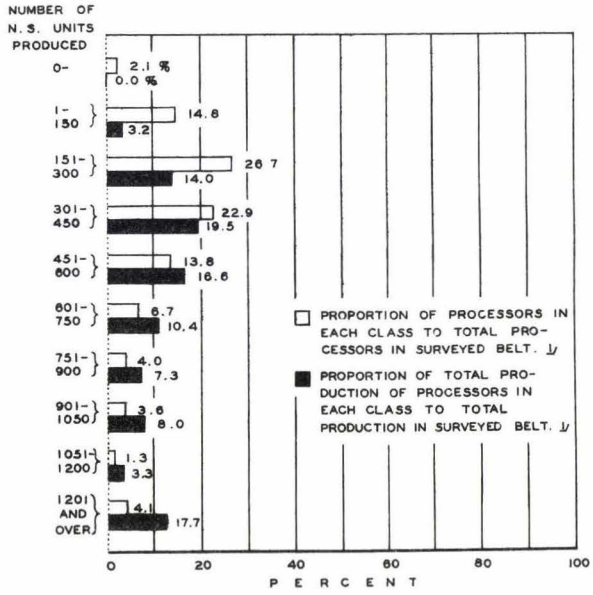
CLASSIFICATION OF TURPENTINE OPERATIONS AND 1933-34 CROPS BY TYPES OF OPERATIONS.


TYPES OF OPERATIONS
PROCESSORS
THOSE WHO STILL THEIR OWN GUM ONLY.
THOSE WHO STILL THEIR OWN AND OTHERS' GUM.
THOSE WHO DO NOT PRODUCE GUM BUT STILL FOR OTHERS.
GUM PRODUCERS WITHOUT STILLS.
4.9 %
52.4 %
3.9
28.4
0.2
0.0
91.0
19.2
PROPORTION OF OPERATIONS IN EACH TYPE TO TOTAL OPERATIONS IN SURVEYED BELT. 1/
PROPORTION OF CROPS WORKED BY EACH TYPE TO TOTAL CROPS WORKED IN SURVEYED BELT. 2/
0 20 40 60 80 100
P E R C E N T

1/ FOR ACTUAL NUMBER OF OPERATIONS, SEE TABLES 2 AND 3, PAGES 4 AND 5.
2/ FOR ACTUAL NUMBER OF CROPS, SEE TABLE 4, PAGE 6.

CHART NO. 4

CLASSIFICATION OF PROCESSORS, SEASON 1934-35 BY QUANTITY OF PRODUCTION, SEASON 1933-34 AND PROPORTION OF TOTAL PRODUCTION MADE BY EACH CLASS.



1/ FOR ACTUAL NUMBER OF PROCESSORS AND PRODUCTION, SEE TABLE 6, PAGE 8.